

## REMARKS/ARGUMENTS

### **I. STATUS OF THE CLAIMS**

Upon entry of the above amendment claims 1 and 13 have been amended. Claims 1-24 are pending in this application. Support for the amendments to claims 1 and 13 can be found in the specification on page 12, lines 20-23. No new material is added.

### **II. REJECTION UNDER 35 U.S.C. 102(e)**

The Examiner has rejected claims 1, 4, 5, 8-14, 16, 17, and 20-24 as being anticipated by Petersen *et al.* (U.S. 6,391,541). The Applicants respectfully traverse this rejection because Petersen *et al.* does not teach or disclose all of the elements disclosed in independent claims 1 and 13 as presently claimed.

With respect to independent claim 13, the Examiner cites Petersen *et al.* as disclosing a cartridge for conducting thermocycling of fluids including a substantially planar heat conducting wall; a light transparent wall which is disposed substantially vertical to the heat conducting wall; a fluid inlet; a fluid outlet; a channel connecting the inlet and the outlet wherein the channel includes a protrusion such that the channel between the inlet and the outlet is longer than the shortest distance between the inlet and the outlet and avoids bubbles in the measuring section of the cartridge. *See*, Petersen *et al.*, figure 22 and column 13, line 56 to column 14 line 5. With respect to independent claim 1, the Examiner cites Petersen *et al.* as disclosing a cartridge as discussed above, and a thermocycling unit ; a light source; a light detector; and a fluid providing unit.

Petersen *et al.*, however, does not teach or suggest a cartridge where the angle formed by the channel walls adjacent to the fluid inlet and the fluid outlet ranges from 100°–150° as recited in the claims. Because Petersen *et al.* does not teach or suggest the angle of 100°–150°

formed by the channel walls, Petersen *et al* does not anticipate independent claims 1 and 13 as presently recited.

Claims 4, 5, 8-12, 23 and 24 depend from independent claim 1, and therefore include all of the limitations of claim 1. Likewise, claims 14, 16, 17, and 20-22 depend from independent claim 13, and contain all of the limitations of claim 13.

Accordingly, the Applicants respectfully request that the Examiner withdraw the rejection.

### **III. REJECTIONS UNDER 35 U.S.C. 103(a).**

#### **A. Petersen *et al*, (U.S. 6,391,541).**

The Examiner has rejected claims 6, 7, and 16 as being unpatentable over Petersen *et al*, as discussed above. The Applicants respectfully traverse this rejection because claims 6 and 7 depend from independent claim 1 and therefore include all of the limitations of independent claim 1. Similarly, claim 16 depends from independent claim 13, and therefore includes all of the limitations of claim 13. Neither independent claim 1 nor 13 have been included in this rejection.

The Examiner cites figure 23 in Petersen *et al* as teaching or suggesting a “wedge-shaped” container. However, as discussed above, Petersen *et al* does not teach or suggest the angle formed by the channel walls adjacent to the fluid inlet and the fluid outlet, wherein the walls of the channel adjacent to the fluid inlet and the fluid outlet ranges from 100°–150° as recited in the independent claims 1 and 13, from which claims 6, 7 and 16 depend. Because the “wedge-shaped” disclosure in Petersen *et al* does not cure the deficiencies as discussed above with respect to the angle formed by the channel walls, Petersen *et al* does not teach or suggest all of the elements of the independent claims 1 and 13, from which the rejected claims depend.

Accordingly, the applicants respectfully request that the Examiner withdraw the rejection.

**B. Petersen *et al*, (U.S. 6,391,541) in view of Columbus *et al*, (EP 0 318255).**

The Examiner has rejected claims 2, 3, 5, 15, 18, and 19 as being unpatentable over Petersen *et al*, in view of Columbus *et al*. The Applicants respectfully traverse this rejection because claims 2, 3, and 5 depend from independent claim 1 and therefore include all of the limitations of independent claim 1. Similarly, claims 15, 18, and 19 depend from independent claim 13, and therefore includes all of the limitations of claim 13. Neither independent claim 1 nor 13 have been included in this rejection.

The Examiner cites Petersen *et al* for the reasons discussed above. The Examiner cites Columbus *et al* as teaching that the use of an aluminum foil wall is conventional in the art for providing heat to a thermal cycling device. *See*, Columbus *et al*, column 7, line 54 to column 8, line 11. However, as discussed above, Columbus *et al* does not teach or suggest an angle of 100°–150° formed by the channel walls adjacent to the fluid inlet and the fluid outlet as recited in claims 1 and 13. Therefore, Columbus *et al* does not cure the deficiencies of Petersen *et al*.

Accordingly, the Applicants respectfully request that the Examiner withdraw the rejection.

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Amdt. dated December 16, 2005  
Reply to Office Action of September 27, 2005



PATENT  
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### CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

Matthew E. Hinsch  
Reg. No. 47,651

TOWNSEND and TOWNSEND and CREW LLP  
Two Embarcadero Center, Eighth Floor  
San Francisco, California 94111-3834  
Tel: 415-576-0200  
Fax: 415-576-0300  
Attachments  
MEH:rcb